

Remarks

The Examiner's comments and grounds of rejection raised in the Office Action dated February 11, 2002 have been carefully considered by the Applicant. To further the prosecution of the present application, claims 1 and 6 have been amended.

Prior to this amendment, Claims 1-16 were pending in the application. In order to overcome the Examiner's objections, an amended set of claims is hereby submitted in triplicate, better distinguishing Applicant's invention from the applied prior art document, without however departing from the spirit of the claims currently on the file.

Claims rejections under USC §102 and §103

It is observed that the Examiner rejected original claims 1-12 as being anticipated by Leenders (US 5,478,695), Harbaugh (US 5,535,871), Hughes (US 6,169,266 B1) and Meyer et al. (US 5,858,474).

Applicant's invention according to amended claim 1 now explicitly recites that the laser beam acts through a polyester backing layer.

Support for the amendment is found, inter alia, in original claim 6 and in the specification, page 6, lines 16-20:

"An important characteristic of the invention consists of the fact that the use of a laser with a wavelength between 900 and 1200 nm, preferably between 1030 and 1100 nm, can remove the covering layer by passing through the polyester backing without affecting it at all, thus preserving all the physical and chemical characteristics that are useful and necessary for their industrial use".

None of the cited prior art documents teaches the acting of the laser beam through a backing polyester layer. In fact, Leenders, which is the document applicable to original claims 1 and 6, is the only one that discloses a backing layer

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through which the laser beam acts. Such a layer, however, is made of *metal oxides, sulfides, and halides* (column 3, lines 38-39), while the Applicant claims the use of a polyester layer.

The different materials are clearly intended to pursue different aims.

In fact, Leenders teaches that *the ablatable metal barrier layer may be covered with substances increasing the recording sensitivity e.g. substances that lower the light-reflectivity and improve the absorption of laser light* (column 3, lines 34-37 of the specification).

On the contrary, Applicant's newly claimed method discloses the acting of a laser beam through a support constituted by a backing polyester layer in order to improve the manufacturing of the final product with regard to security, allowing ablation of material from the covering layer (i.e. the layer which shows when looking through the backing layers) to occur even after the covering layer has been inserted into the final product to be secured, for instance a note.

The polyester layer is not aimed at increasing record sensitivity or improving absorption of light: on the contrary, it *"is fully transparent to the laser beam"* (page 7, lines 4-5) and helps obtaining a secure product.

Thus Applicant strongly believes that his invention as per claim 1 solves problems which are not even addressed by the Leenders's method.

Claims rejections under USC §112

The Examiner indicated that certain terms appearing in claims 1, 9 and 10 respectively rendered the claims vague and indefinite.

The objected terms have been removed or replaced where appropriate, as shown in the attached marked up version of the claims.

Finally, the text of original claim 6, which lacked proper antecedent basis in the description, has been introduced in the specification.

All matters having been attended to, it is trusted that the application is now

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in order for allowance and a notice to this effect is respectfully requested.

✓ Respectfully submitted,



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Encls.:

- Marked up version to show changes made to the claims;
- Clean version of a new specification paragraph.

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Version with markings to show amendments made

WHAT IS CLAIMED IS:

1. A method for manufacturing a security element for documents, forgery-proof labels, checks and seals ~~and the like~~, comprising the steps of:
 - 5 ~~providing a polyester backing layer, and~~
 - applying a covering layer to at least one face of said backing layer, ~~the method further comprising the steps of: and~~
 - removing preset regions of said covering layer with a laser beam having a wavelength between 900 and 1200 nm, said preset regions defining a code which can be
 - 10 customized in any manner and detected in any manner, said laser beam acting on said covering layer through said backing layer.
2. The method according to claim 1, wherein said covering layer is constituted by ink.
3. The method according to claim 1, wherein said covering layer is constituted by a metallic layer.
- 15 4. The method according to claim 1, wherein said covering layer is constituted by an aluminum layer.
5. The method according to claim 1, wherein said covering layer is constituted by a magnetic layer.
6. The method according to claim 1, comprising a second backing layer which is
- 20 applied to the other face of said covering layer, ~~said laser beam acting on said covering layer through one of said backing layers~~
7. The method according to claim 1, wherein said backing layer is constituted by a band or tape which can be separated in order to obtain threads, said band forming in succession a first region for obtaining optically detectable characters provided by means
- 25 of conventional methods, said first regions being interleaved with regions for forming, in the covering layer, preset regions for obtaining said code which can be customized in any manner and detected in any manner.
8. The method according to claim 7, comprising, on said band, a region which can be

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coded and can be interleaved with said first region with optically detectable characters and with said region provided with a code which can be customized in any manner and detected in any manner.

9. The method according to claim 1, wherein said laser beam has a solid-state source
5 of the Nd:Yag type. Nd:Yag source.

10. The method according to claim 1, wherein said laser beam has a ~~frequency~~
wavelength which is ~~preferably~~ comprised between 1030 and 1100 nm.

11. The method according to claim 1, wherein said laser beam has a wavelength of
1064 nm.

10 12. The method according to claim 1, wherein said step of removing said preset
regions is performed while said backing layer is inserted in a sheet of paper.

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Clean version of new paragraph

The beam may also act on the covering layer through one of the backing layers.

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